

LTL**LUMINAIRE TESTING LABORATORY, INC.**

IES

SUSTAINING
MEMBER905 Harrison Street · Allentown, PA 18103 · (610) 770-1044 · Fax (610) 770-8912 · www.LuminaireTesting.com

LTL NUMBER: 05627

DATE: 02-16-2001

PREPARED FOR: ADVANCED OPTICAL TECHNOLOGIES

CATALOG NUMBER: LINEAR FLUORESCENT UPLIGHT VERSION 3

LUMINAIRE: FORMED STEEL SUPPORT, WHITE INTERNAL REFLECTORS, TRANSLUCENT
WHITE ACRYLIC LOWER ENCLOSURE, FORMED SPECULAR ALUMINUM
REFLECTORS, OPEN TOP.

LAMP: ONE SYLVANIA FP54/841/HO RATED AT 4400 LUMENS.

BALLAST: ONE SYLVANIA QT1X54/120PHO

MOUNTING: PENDENT

LUMEN TO CANDELA RATIO USED = 9.18

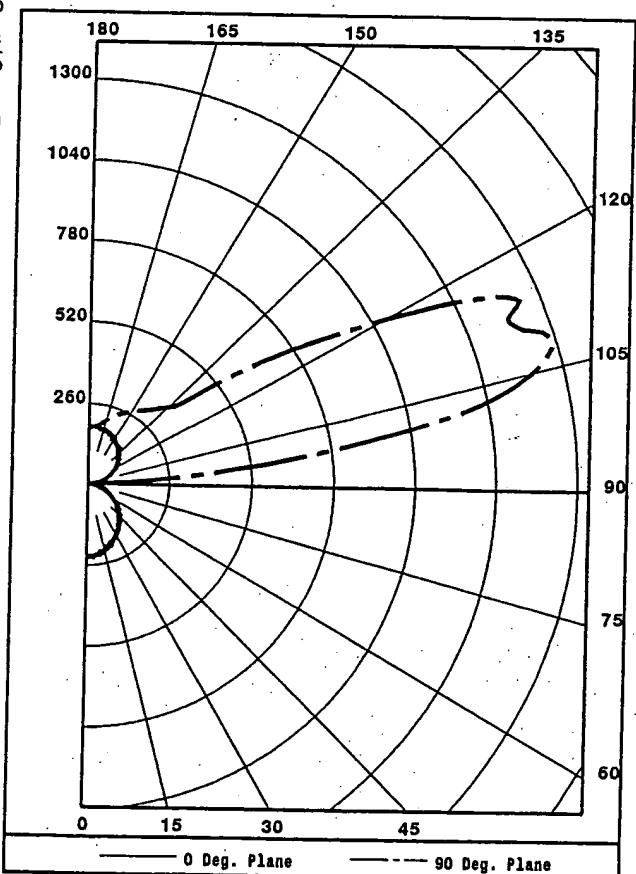
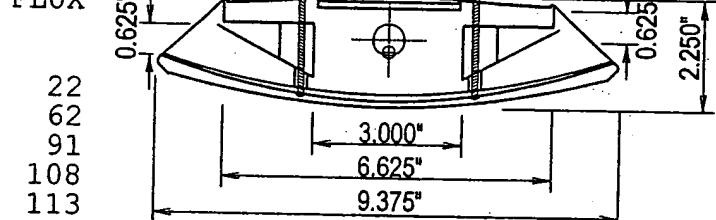
TOTAL INPUT WATTS = 59.9 AT 120.0 VOLTS

THE 0 DEGREE PLANE IS PARALLEL WITH THE LAMPS.

CANDELA DISTRIBUTION

	0.0	22.5	45.0	67.5	90.0
0	233	233	233	233	233
5	234	233	233	231	232
15	217	218	218	217	218
25	199	198	198	197	198
35	174	172	174	172	171
45	145	145	145	145	146
55	110	112	113	114	114
65	79	78	79	78	80
75	38	39	41	43	42
85	9	12	17	17	16
90	2	18	19	19	19
95	19	396	368	323	313
105	52	356	1068	1393	1458
115	84	185	668	1271	1465
125	111	185	303	602	750
135	135	186	263	330	356
145	154	184	239	279	292
155	170	185	220	245	253
165	178	183	198	209	214
175	185	183	186	187	186
180	183	183	183	183	183

FLUX



ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LAMP	% FIXT
0- 30	175	4.0	5.0
0- 40	283	6.4	8.1
0- 60	497	11.3	14.2
0- 90	633	14.4	18.1
90-120	1993	45.3	57.1
90-130	2340	53.2	67.0
90-150	2686	61.0	76.9
90-180	2859	65.0	81.9
0-180	3493	79.4	100.0

79.4%

TOTAL LUMINAIRE EFFICIENCY:

CIE TYPE: SEMI-INDIRECT

PLANE: 0-DEG 90-DEG

SPACING CRITERIA: 1.2 1.2

TESTED BY HERSCHEL SCHRECK
CHECKED BY MIKE GRATHER

THIS REPORT BASED ON LM-41 AND OTHER PERTINENT IES PROCEDURES.

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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD
EFFECTIVE FLOOR CAVITY REFLECTANCE 0.20

RC RW	80				70				50				30				10				0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
0	79	79	79	79	70	70	70	70	52	52	52	36	36	36	21	21	21	14			
1	72	69	66	63	63	61	58	56	46	44	43	32	31	30	19	18	18	12			
2	66	60	55	52	58	53	49	46	40	37	35	28	26	25	17	16	15	10			
3	60	53	47	43	52	47	42	38	35	32	30	25	23	21	15	14	13	9			
4	55	47	41	36	48	41	36	32	31	28	25	22	20	18	13	12	11	8			
5	50	41	35	31	44	37	31	28	28	24	21	19	17	15	12	11	10	6			
6	46	37	31	26	40	33	27	24	25	21	18	17	15	13	11	9	8	6			
7	42	33	27	23	37	29	24	21	22	19	16	16	13	12	10	8	7	5			
8	39	30	24	20	34	26	21	18	20	16	14	14	12	10	9	7	6	4			
9	36	27	21	17	32	24	19	16	18	15	12	13	10	9	8	6	6	4			
10	33	24	19	15	29	22	17	14	17	13	11	12	9	8	7	6	5	3			

PLANE: 0-DEG 90-DEG
LUMINOUS LENGTH: 46.250 9.375
HEIGHT OF SIDE: 2.250 2.250LUMINANCE IN CANDELA PER SQUARE METER
ANGLE AVERAGE AVERAGE AVERAGE
IN DEG 0-DEG 45-DEG 90-DEG
0 833. 833. 833.
45 716. 1069. 738.
55 663. 919. 710.
65 635. 742. 667.
75 481. 473. 415.
85 289. 264. 202.

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	0.0	22.5	45.0	67.5	90.0	ZONAL LUMEN SUMMARY
0	233	233	233	233	233	0- 5 6.
5	234	233	233	231	232	5- 10 16.
10	226	225	226	225	225	10- 15 27.
15	217	218	218	217	218	15- 20 35.
20	207	209	209	207	208	20- 25 43.
25	199	198	198	197	198	25- 30 48.
30	184	185	185	184	185	30- 35 53.
35	174	172	174	172	171	35- 40 55.
40	160	160	160	160	159	40- 45 57.
45	145	145	145	145	146	45- 50 56.
50	129	129	129	130	131	50- 55 54.
55	110	112	113	114	114	55- 60 48.
60	93	95	95	94	95	60- 65 41.
65	79	78	79	78	80	65- 70 35.
70	58	58	60	61	61	70- 75 27.
75	38	39	41	43	42	75- 80 17.
80	24	25	26	27	26	80- 85 11.
85	9	12	17	17	16	85- 90 6.
90	2	18	19	19	19	90- 95 60.
95	19	396	368	323	313	95-100 300.
100	34	530	960	1003	981	100-105 465.
105	52	356	1068	1393	1458	105-110 467.
110	70	207	992	1354	1500	110-115 400.
115	84	185	668	1271	1465	115-120 302.
120	98	181	433	889	1082	120-125 204.
125	111	185	303	602	750	125-130 143.
130	125	185	279	383	484	130-135 107.
135	135	186	263	330	356	135-140 92.
140	143	184	252	298	318	140-145 79.
145	154	184	239	279	292	145-150 67.
150	164	185	232	264	272	150-155 56.
155	170	185	220	245	253	155-160 44.
160	176	186	209	227	236	160-165 33.
165	178	183	198	209	214	165-170 23.
170	181	185	188	192	194	170-175 13.
175	185	183	186	187	186	175-180 4.
180	183	183	183	183	183	

THIS TEST WAS CONDUCTED USING RELATIVE PHOTOMETRY TECHNIQUES ACCORDING TO STANDARD IESNA PROCEDURES. THE USER MUST THEREFORE USE CAUTION IN THE FOLLOWING SITUATIONS: 1) THIS TEST WAS PERFORMED USING A SPECIFIC BALLAST/LAMP COMBINATION. EXTRAPOLATION OF THESE DATA FOR OTHER BALLAST/LAMP COMBINATIONS MAY PRODUCE ERRONEOUS RESULTS. 2) ACCORDING TO IESNA PROCEDURES, THE BALLAST(S) AND LAMP(S) ARE PRESUMED TO PRODUCE 100% OF RATED OUTPUT. AN APPROPRIATE BALLAST FACTOR MUST BE APPLIED TO THE LUMEN OUTPUT RATINGS AND LUMINOUS INTENSITY VALUES GIVEN. 3) THIS TEST WAS CONDUCTED IN A CONTROLLED LABORATORY ENVIRONMENT WHERE THE AMBIENT TEMPERATURE WAS HELD AT 25°C ±1°C. FIELD PERFORMANCE MAY DIFFER PARTICULARLY IN REGARDS TO CHANGE IN LUMINOUS OUTPUT AS A RESULT OF DIFFERENCE IN AMBIENT TEMPERATURE AND METHOD OF MOUNTING THE LUMINAIRE.